

## PATENT SPECIFICATION

368,113



Application Date: April 11, 1931. No. 10,721/31.

Complete Left: Jan. 11, 1932.

Complete Accepted: March 3, 1932.

## PROVISIONAL SPECIFICATION.

## Improvements in and relating to Cornice Lighting Apparatus.

We, HOLOPHANE LIMITED, a company organised and existing under the laws of Great Britain, and ROLLO GILLESPIE WILLIAMS, a British subject, all of Holophane House, Elverton Street, Vincent Square, London, S.W.1, England, do hereby declare the nature of this invention to be as follows:—

The present invention relates to improvements in cornice lighting troughs adapted to be arranged on the walls of cinemas and like places in order to light up the cornices with clear or coloured lighting and thus produce cheerful effects within the interior of the building in which the trough is mounted.

The present invention is designed to provide a lighting trough from which an even light is obtained throughout the length of the trough.

In its simplest form the invention relates to a lamp container or trough of any suitable dimensions adapted to lie along the wall of the cinema or like place beneath the position which it is desired to light up. The floor of the trough is in the form of a series of stepped reflectors on each side of a central lamp socket. These stepped reflectors are adapted to rise in steps from a central position adjacent to the lamp socket upwards towards the ends of the trough. This trough is closed by panes of glass. The said central lamp socket is arranged beneath a central cover pane of thick opal glass. Downwardly projecting masks are arranged on each side of the frame containing this central pane. These masks are adapted to prevent direct rays of light from passing from the lamp in the central socket through the screen formed by the glass cover on each side

of said thick central pane of opal glass. The side panes of the cover are preferably formed of light diffusing glass.

In use the direct rays of light pass from the lamp through the thick opal glass while reflected light only is thrown from the source of light through the thin glass side pieces of the cover, since the downwardly projecting masks on each side of the lamp cut off the side rays from said source of light except those rays which are at such an angle that they strike the stepped reflectors in the floor of the trough. These reflectors are preferably formed with a polished reflecting surface.

When it is desired to provide coloured lighting effects multiple troughs may be arranged. For instance three troughs placed side by side, each trough having a different coloured glass cover provides a striking colour effect on the walls of a cinema or other building lighted up by the trough. In such an arrangement the central glass pane may be comprised of superposed panes of diffusing glass and coloured glass while the side panes may be clear transparent colour screens.

We have found from experience that with a coloured lighting trough it is not necessary to employ the masks above described in connection with clear glass troughs. The stepped floors employed in such colour lighting troughs are conveniently formed by matt white diffusing reflectors.

Dated this 11th day of April, 1931.

SEFTON-JONES, O'DELL &  
STEPHENS,

Chartered Patent Agents.

285, High Holborn, London, W.C.1,  
Agents for the Applicants.

## COMPLETE SPECIFICATION.

## Improvements in and relating to Cornice Lighting Apparatus.

We, HOLOPHANE LIMITED, a company organised and existing under the laws of Great Britain, and ROLLO GILLESPIE WILLIAMS, a British subject, all of Holophane House, Elverton Street, Vincent Square, London, S.W.1, England, do hereby declare the nature of this inven-

tion, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The present invention relates to improvements in cornice lighting troughs adapted to be arranged on the walls of

cinemas and like places in order to light up the cornices with clear or coloured lighting effects evenly distributed produced from one or a small number of lamps which may be arranged at a distance from each other as much as three feet apart.

Briefly stated our invention comprises a lamp container or trough adapted to lie along a straight or curved surface in which the lamp receptacle is covered by translucent panels and its floor is formed by sets of stepped reflectors each of said sets of steps rising from a central position adjacent to a lamp socket to positions about half way between their lamp socket and the two adjacent lamp sockets or to the end of the trough.

Our invention is more particularly described with reference to the accompanying drawings in which:—

Figure 1 is a sectional side view of a lamp unit broken away from a trough or container.

Figure 2 is a plan view of Figure 1 with the side panels removed on the right hand side.

Figure 3 is a perspective view of a trough in position against a cornice.

Figure 4 is a sectional side view of the lamp unit shown in Figure 1 but without the lamp masks.

Figure 5 is a plan view of a multiple unit with the panels partly broken away and

Figure 6 is a perspective view of the multiple trough shown in Figure 5 in position against a cornice.

Our invention comprises a lamp container or trough covered by light diffusing panels in which a number of lamps transmit evenly distributed lighting effects to wall surfaces and the like. A simple form of our invention is shown by way of example in the drawings in which a lamp container or trough is illustrated in Figure 3 of any suitable dimensions adapted to lie along a straight or curved surface such as the wall of a building near the position which it is desired to light up. This lamp container or trough may be provided with a double floor as shown in Figures 1 and 4, the space 2 between the bottom of the trough and the reflecting upper floor forming a convenient wiring chamber. The reflecting floor of the trough is formed by sets of stepped reflectors 3; as shown in Figures 1 and 2 each set of steps rises on each side of a central position adjacent to the lamp socket 4 to a position conveniently half way between their lamp socket and the two adjacent lamp sockets or to the end of the trough. These steps are graduated to increase in area as they depart from the lamp socket with their planes

rising at steeper angles to the horizontal the greater their distance from the lamp socket (Figures 1 and 4) so that approximately equal quantities of light flux are reflected from each step of the reflector upwards towards their side panels and evenly distributed lighting effects thus obtained throughout the length of the troughs. This trough is closed by panels 5 preferably of diffusing glass or other translucent material having the desired diffusing properties. Each lamp socket 4 is arranged beneath a cover pane 6 of thick opal glass or translucent material having a higher property of light absorption than the side panels above described. As shown in Figure 1 in some cases downwardly projecting masks 7 may be arranged as shown on each side of the frame containing the cover pane directly above the lamp socket. If used these masks 7 are adapted to prevent direct rays of light from passing from the lamp in the socket through the side panels 5 above the stepped reflectors 3 on each side of the thick pane 6 directly above the lamp socket 4.

In use the direct rays of light pass from the lamp through the panel 6 of thick opal glass or the like directly above the lamp socket 4 and if masks 7 are used reflected light only from the source of light passes through the thinner side panels 5 above the stepped reflectors 3 since the downwardly projecting masks 7 on each side of the lamp cut off the side rays from said source of light except those rays which are at such an angle that they strike the stepped reflectors 3 in the floor of the trough. If glass side panels 5 are used these reflectors 3 are preferably formed with a polished reflecting surface, on the other hand if the panels are made of a translucent material other than glass the reflectors may have matt white diffusing surfaces instead of polished reflecting surfaces.

When it is desired to provide coloured lighting effects multiple troughs may be arranged as shown by way of example in Figures 5 and 6. Conveniently three troughs may be placed side by side either in a single container or as independent troughs. If each trough has a different coloured glass cover, a striking colour effect is provided on the walls of a cinema or other building lighted up by the trough. In such an arrangement the central glass panes for the panes directly over the lamp sockets may be comprised of superposed panes of diffusing glass and coloured glass while the side panels may be clear transparent colour screens and not of diffusing glass or other diffusing material.

Having now particularly described and ascertained the nature of our said inven-

tion and in what manner the same is to be performed, we declare that what we claim is:—

1. A lamp container or trough adapted to lie along a straight or curved surface in which the lamp receptacle is covered by translucent panels and its floor is formed by sets of stepped reflectors each of said sets of steps rising from a central position adjacent to a lamp socket to a position about half way between their lamp socket and the two adjacent lamp sockets or the end of the trough.

2. A lamp container or trough as claimed in claim 1 in which the steps are graduated as they depart from the lamp socket to increase in area with their planes rising at steeper angles from the horizontal.

3. A lamp container or trough as claimed in either of the preceding claims in which the stepped reflectors are covered by panels of light diffusing translucent material and in which each lamp socket is covered by a panel of translucent material having a higher property of light absorption than the side panels covering the stepped reflectors.

4. A lamp container or trough as claimed in any of the preceding claims in which downwardly projecting masks are arranged on each side of the frame containing the panel directly above the lamp socket.

5. A lamp container or trough as claimed in any of the preceding claims in which multiple troughs are arranged side by side and each trough has a different coloured translucent cover.

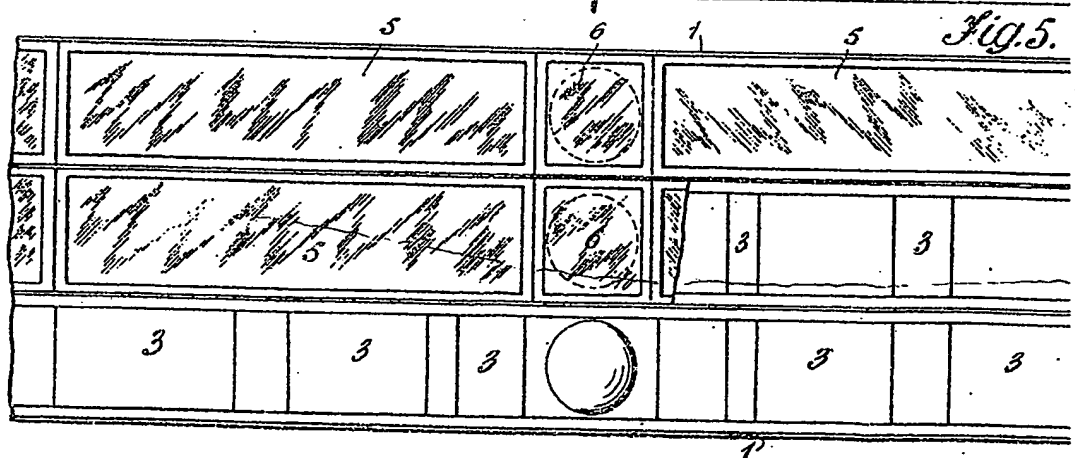
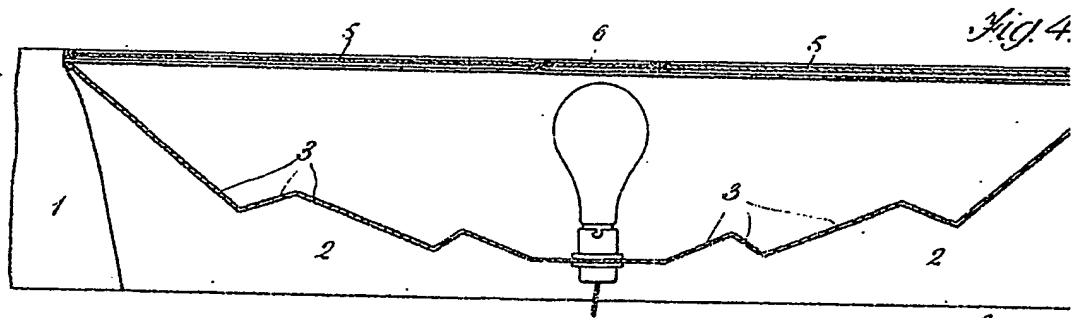
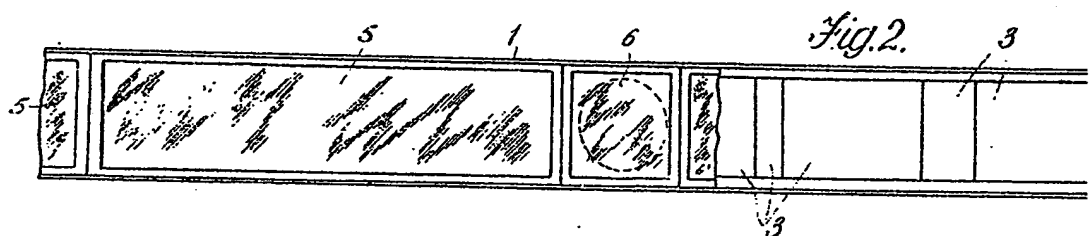
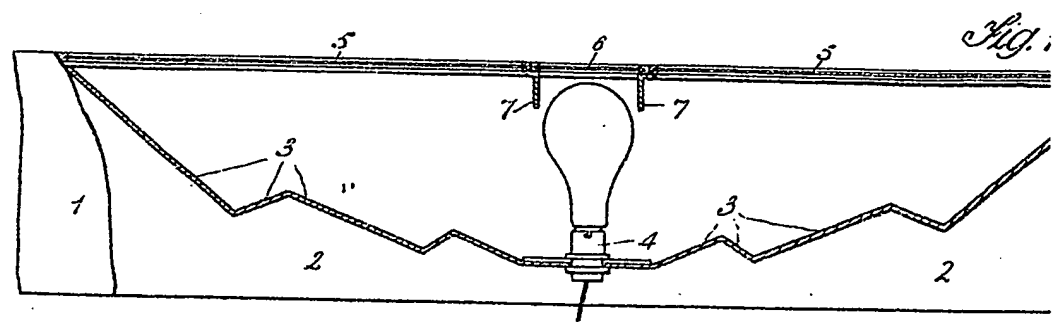
6. A multiple lamp container or trough as claimed in claim 5 in which the cover panes directly over the lamp sockets are comprised of superposed panes of diffusing glass and coloured glass and the side panels of clear transparent coloured material.

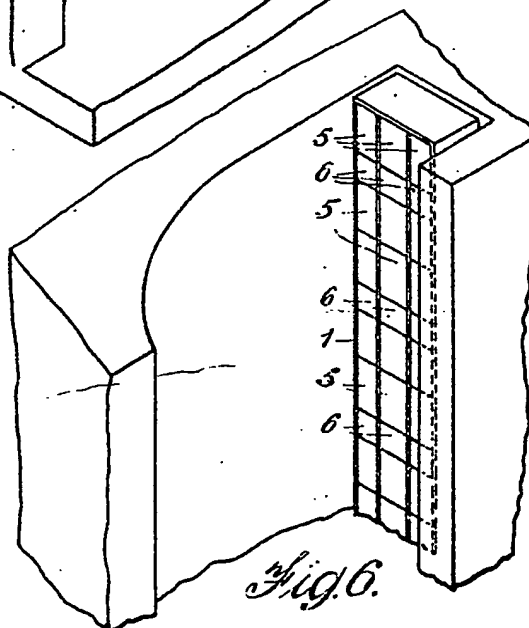
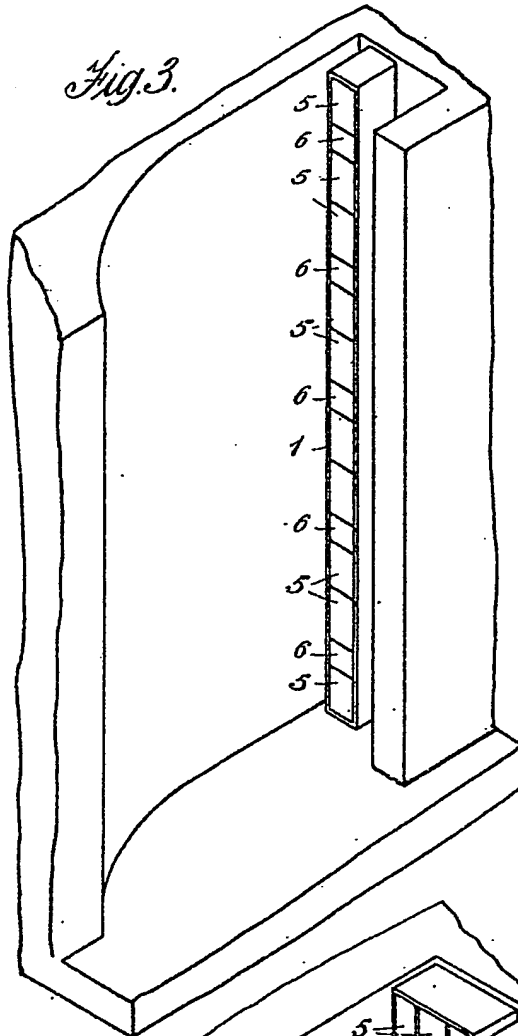
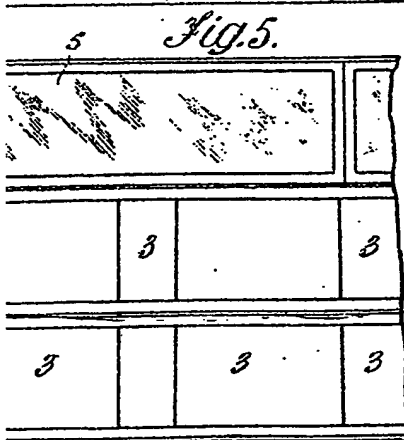
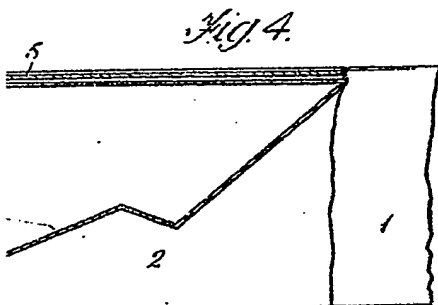
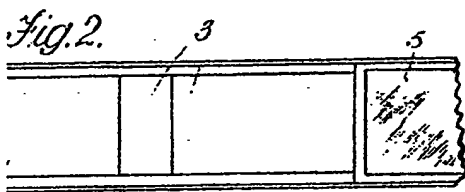
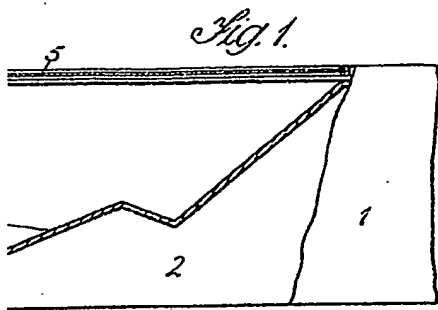
7. The lamp containers or troughs substantially as described with reference to the accompanying drawings.

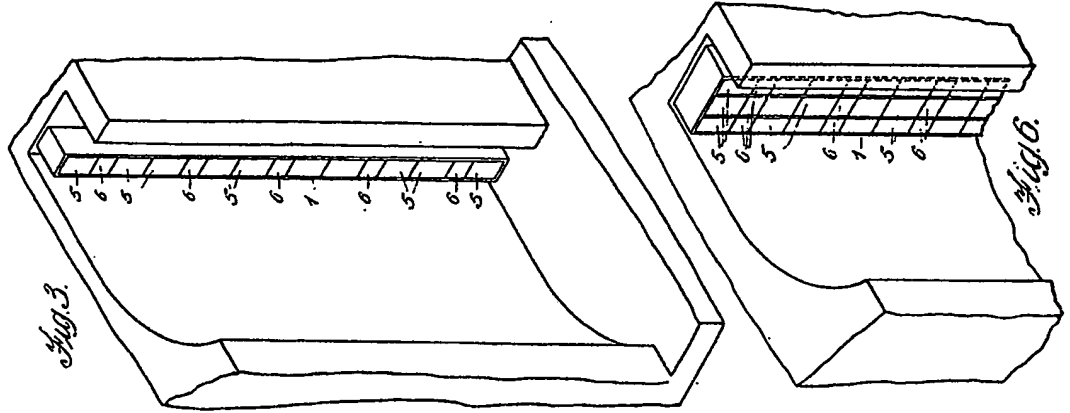
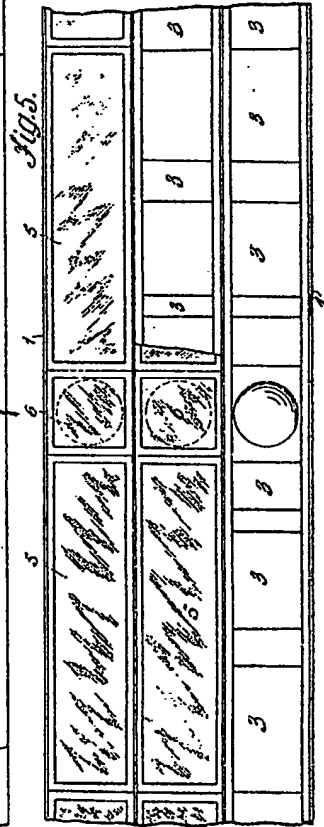
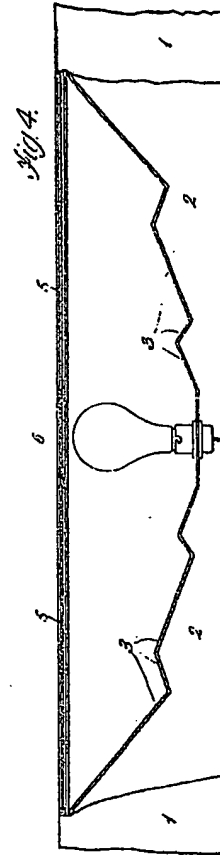
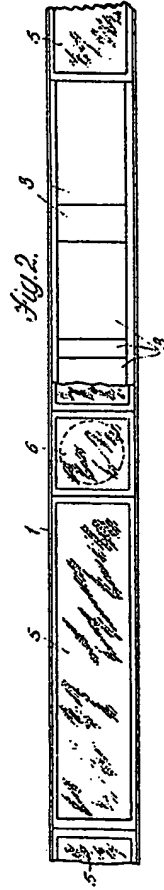
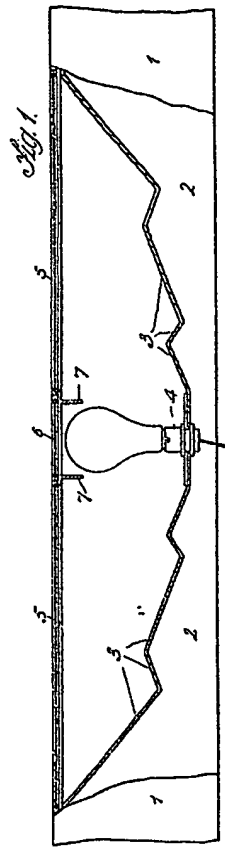
Dated this 11th day of January, 1932.

SEFTON-JONES, O'DELL &  
STEPHENS,  
Chartered Patent Agents,  
285, High Holborn, London, W.C.1,  
Agents for the Applicants.

[This Drawing is a reproduction of the Original on a reduced scale.]







[This Drawing is a reproduction of the Original on a reduced scale]